# PATENT ABSTRACTS OF JAPAN of D6

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(72)Inventor : TAKAMIZAWA MINORU
ISHIHARA TOSHINOBU
YAMAMOTO AKIRA

## (54) PRODUCTION OF TERTIARY HYDROCARBONSILYL COMPOUND

(57)Abstract:

PURPOSE: To safely and readily obtain the titled compound useful as a special silylating agent used for synthesizing medicines without using dangerous Li compounds, by reacting a Grignard reagent with a specific organosilicon compound in an organic solvent.

CONSTITUTION: (A) A Grignard reagent expressed by the formula R1MgX (R1 is tertiary hydrocarbon; X is halogen), e.g. tert-butylmagnesium chloride, is reacted with (B) an organosilicon compound expressed by the formula AmR2nSiH4-m-n [R2 is (substituted) monofunctional hydrocarbon; a is alkoxy; m is 1,2 or 3; n is 0, 1 or 2; m+n≤3], e.g. dimethylmethoxysilane, in an organic solvent, preferably THF, preferably at 40W100°C in an inert atmosphere to afford the aimed compound, e.g. tert-butylethoxysilane.

LEGAL STATUS

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## Patent Abstracts of Japan

PUBLICATION NUMBER : 62022790
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APPLICANT : SHIN ETSU CHEM CO LTD;

INVENTOR : YAMAMOTO AKIRA;

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TITLE : PRODUCTION OF TERTIARY HYDROCARBONSILYL COMPOUND

ABSTRACT : PURPOSE: To safely and readily obtain the titled compound useful as a special silylating agent used for synthesizing medicines without using dangerous Li compounds, by reacting a Grignard reagent with a specific organosilicon compound in an organic solvent.

CONSTITUTION: (A) A Grignard reagent expressed by the formula $R^1MgX$ ($R^1$ is tertiary hydrocarbon; X is halogen), e.g. tert-butylmagnesium chloride, is reacted with (B) an organosilicon compound expressed by the formula $A_mR^2_nSiH_{4-m-n}$ [$R^2$ is (substituted) monofunctional hydrocarbon; a is alkoxy; m is 1,2 or 3; n is 0, 1 or 2; $m+n \leq 3$], e.g. dimethylmethoxysilane, in an organic solvent, preferably THF, preferably at 40~100°C in an inert atmosphere to afford the aimed compound, e.g. tert-butylethoxysilane.

feed of MeSiCl3 to give Ph2SiMeCl/PhMeSiCl2 in controllable ratios.

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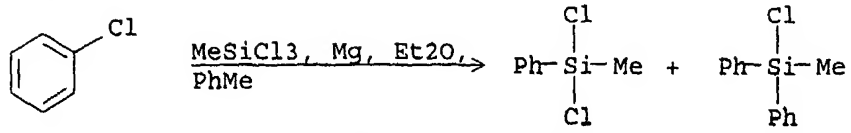


NOTE: continuous process, ratio of products depends on ratio of reactants

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 44 CASREACT COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 138:4688 CASREACT
TITLE: Method of preparing triphenylsilanol by phenylation of chloro(phenyl)silanes with phenylmagnesium chloride and subsequent reaction with water in mixed THF-toluene solvent
INVENTOR(S): Zhun, V. I.; Zhun, A. B.; Polivanov, A. N.; Chernyshev, E. A.
PATENT ASSIGNEE(S): Obshchestvo s Ogranichennoi Otvetstvennost'yu NPP "MAGNOS", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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AB Triphenylsilanol is prepared by reaction of a phenylchlorosilane, e.g., Ph2SiCl2 or PhSiCl3, with H2O in an organic solvent such that the phenylchlorosilane is treated with PhMgCl in a mixture of THF and toluene, and then the reaction mixture is treated with H2O in the same solvents, whereupon the desired product is isolated; the THF to toluene ratio used ranges from 1:3 to 3:1 by volume, resp. In an example, treating 500 g Ph2SiCl2 with PhMgCl generated in situ from 225 g PhCl and Mg in a mixture of 250 mL THF and 250 mL PhMe and holding the mixture at room temperature 6 h followed by treatment with H2O gave 94.2% Ph3SiOH. This method makes it possible to prepare the desired product without isolation of Ph3SiCl from the reaction mixture followed by treatment with H2O and recovery of final product and also to use a mixture of solvents, thus causing greater process selectivity.